

REMARKS

The specification has been amended to make an editorial change therein.

The original claims inadvertently included underlining. Rather than attempting to remove this underlining and possibly introducing errors into the claims, the original claims have been replaced with new claims 17-31 that do not include the underlining and that have been further amended to make editorial changes therein to conform to U.S. practice.

The indication that original claims 4-5 include patentable subject matter is acknowledged with thanks. In reliance thereon, the subject matter of these claims has been retained in new claims 20-21.

Claims 15-16 were rejected as anticipated by ODA US2001/0017422. New claims 30-31 replace these claims and have been further revised to provide that the thickness of the second insulating layer tapers from the wider part of the trench to the narrower part, for example as shown in Figure 4 by element 105 (the modified part of the insulation layer 103). ODA does not disclose this taper and reconsideration and withdrawal of the rejection are respectfully requested.

ODA discloses (Figure 2G) an interim state of the device wherein a top (wider) part of the trench has walls covered with two layers of a refractory metal nitride and a bottom (narrower) part of the trench has walls covered with only one of

the two layers of refractory metal nitride (see the discussion in paragraphs 0093-0111). The refractory metal nitride is not tapered and thus claims 30-31 avoid the rejection under §102.

Claims 1-3 and 6-14 were rejected as unpatentable over ODA in view of TAKASE et al. 6,051,508. These claims have been replaced with claims 17-19 and 22-29 and reconsideration and withdrawal of the rejection are respectfully requested.

Claim 17 provides that the modified layer is a layer of modified hydrogenated polysiloxane. The Official Action does not identify in either reference where there is a suggestion to modify the material of the insulating layer in which the conducting portion is found. Indeed, there is no suggestion in either reference to modify the material of the insulating layer and thus claims 17-24 avoid the rejection under §103.

Claim 18 is further allowable because there is no suggestion to taper the modified layer, as explained above.

Claim 25 includes the step of etching the insulating film with an etching gas including a fluorocarbon gas and an oxidant gas. The Official Action states that these steps are inherent in the device made from the combination of ODA and TAKASE et al. However, the use of the claimed etching gas is not inherent. The devices in these references are formed without reference to the claimed etching gas and thus are formed in other ways, meaning that use of the claimed etching gas is not inherent. There must be something in the combination that

suggests the modification. There is not and the rejection should be withdrawn.

Claim 26 is further allowable because there is no suggestion in either reference to use the modified hydrogenated polysiloxane. Claim 27 is further allowable because there is no suggestion in either reference to taper the modified layer.

New claims 32-34 are allowable because the references do not disclose or suggest the modified layer between the conductor and the first (dielectric) layer, where the modified layer is a modified form of the dielectric material of the first layer, and where the modified layer has a tapered thickness so that an interface between the modified layer and the first layer is at a different angle to the surface of the first layer than side walls of the trench. These shortcomings of the references are explained above.

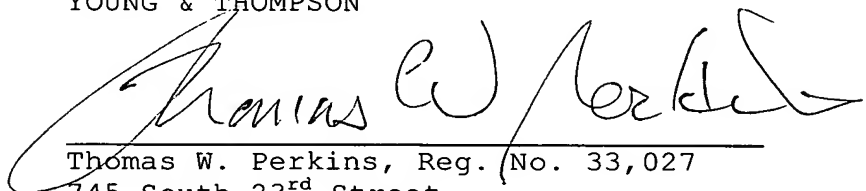
In view of the present amendment and the foregoing remarks, it is believed that the present application has been placed in condition for allowance. Reconsideration and allowance are respectfully requested.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any

overpayment to Deposit Account No. 25-0120 for any additional
fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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A handwritten signature in dark ink, appearing to read "Thomas W. Perkins", is written over a horizontal line.

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